Safety Instructions

Appropriate Use
- Use the model SSV lubricant metering devices only for dispensing lubricants in centralized lubrication systems.

General Safety Instructions
- The progressive centralized lubrication system connected to a pump must always be secured with a safety valve.
- LINCOLN model SSV lubricant metering devices are state of the art.
- Incorrect use may result in bearing damage caused by poor or over-lubrication.
- Each outlet which will be used must be equipped with a check valve.
- In the case of the metering devices model SSV 6 - 12 and the block-type metering devices SSV 14 through SSV 22 the **outlets 1 and/or 2 must never be closed.** In the case of the combined metering devices model SSV 14 - 22, **the two outlets with the highest numbers must never be closed**.
- Unauthorized modifications or changes to an installed system are not admissible. Any modification must be subject to prior consultation with the manufacturer of the lubrication system.
- Use only original LINCOLN spare parts (see Parts Catalog) or the parts approved by LINCOLN.

Regulations for Prevention of Accidents
- Adhere to the regulations for prevention of accidents which are effective in the country where the system is to be used.

Operation, Repair and Maintenace
- Repair should only be performed by:
- authorized and
- instructed personnel
  who are familiar with centralized lubrication system.

Installation
- Install the metering devices at a suitable location in accordance with the lubrication diagram.
- It is recommended that the metering devices be installed in such a way that the outlets are not close to the chassis or the attaching plate. This will facilitate troubleshooting in the case the system is blocked.
- The main metering devices with indicator pin must be installed in such a way that the indicator pin is easily visible.

When the push-in type fittings are used, note the following:
- For the **metering device inlet** use only **push-in type fittings** with **reinforced collar** and sealing ring.
- For the **outlet fittings** of the **main metering device** use only **valve bodies with reinforced collar.**

Note: In the case of construction machines or agricultural machines use high pressure plastic hoses for the lubricant feet lines. In such cases the outlet fittings of the secondary metering devices and the connection fittings to the lubricant points must have a reiforced collet

- Use only high pressure plastic hoses and plastic tubes specified by LINCOLN and adhere to the specified system pressures.

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Table of Contents

Further information can be found in the following manuals:

Technical Description QUICKLUB Pump 203
Technical Description for "Electronic Control Units" of pump 203 :

Printed-Circuit Board 236-13862-1 - Model V10 - V13*
Printed-Circuit Board 236-13857-1 - Model H *
Printed-Circuit Board 236-13870-1 - Models M 00-M 15*
Printed-Circuit Board 236-13870-1 - Models M 16-M 23*
Installation Instructions
Parts Catalog

* The model designation of the printed-circuit board is part of the pump model designation mentioned on the pump nameplate.
Example: B. : P 203 - 2XN - 1K6 - 24 -1A1.10 - **V10**

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Progressive Metering Devices Model SSV

Suitable Lubricants

- The progressive metering devices model SSV can be used for dispensing
- mineral oils of at least 40 mm²/s (cST) or
- greases up to the penetration class NLGI 2

Note: It must nevertheless be ensured that the oils or greases used do not alter their consistency in the course of time or under the influence of temperature or pressure.

Progressive Metering Devices - General

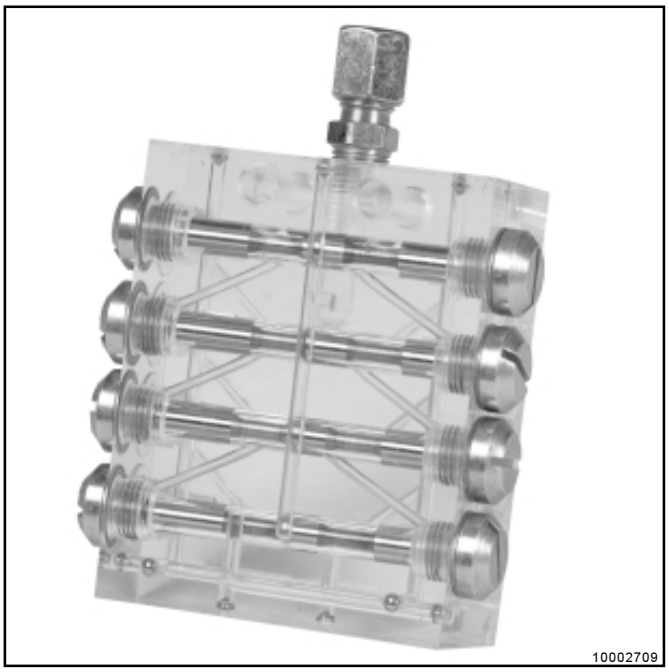

Fig. 1 -SSV 8 metering device, shown as a demonstration model

The progressive metering devices

- are piston-operated metering devices;
- automatically (progressively) dispense the lubricant fed by the pump to the connected lubrication points;
- have a lubricant output of 0,2 cm^3 per outlet and piston stroke;
- when one or more outlets are closed (see “Combining of outlets) they can dispense a **double or multiple lubricant quantity;**
- are available with 6 to 12 outlets or up to 22 outlets;
- offer the option of combining several lubrication points into one centralized lubrication point.
- reliably meter the feed lubricant in preset single quantities;
- can be monitored usually or electrically;
- A blockage in any lubrication circuit is indicated by grease leaking at the corresponding pressure limiting valve

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Lubricant Distribution within the Metering Device

- The 5 following illustrations show how the lubricant distribution is made to the individual outlets.

Note: To simplify the description we only show the lubricant distribution for outlets 2, 7, 5, 3 and 1. The remaining distribution operatons are derived from the logical pumping sequence.

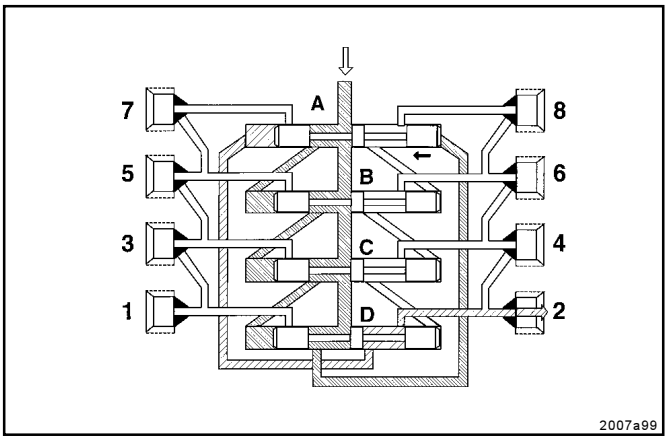

Fig. 2- Phase 1

Phase 1

- The lubricant enters the metering device from above (white arrow above) and flows to the right-hand end of piston A.
- Piston A (black arrow) is moved to the left under the pressure of the lubricant, causing the lubricant ahead of the left-hand of piston A to be dispensed to outlet 2 (dashed arrow).

Lubricant under pump pressure

Lubricant under piston delivery pressure

Lubricant pressureless

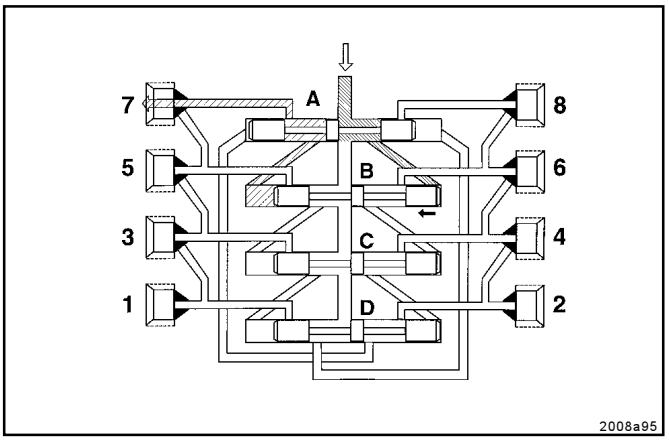

Fig. 3 - Phase 2

Phase 2

- Once piston A has reached its left-hand final position, the junction channel to the right-hand end of piston B is opened.
- The lubricant which arrives from above (white arrow) also moves piston B (black arrow) to the left, causing the lubricant quantity ahead of the left-hand end of piston B to be dispensed to outlet 7(dashed arrow) .

Lubricant under pump pressure

Lubricant under piston delivery pressure

Lubricant pressureless

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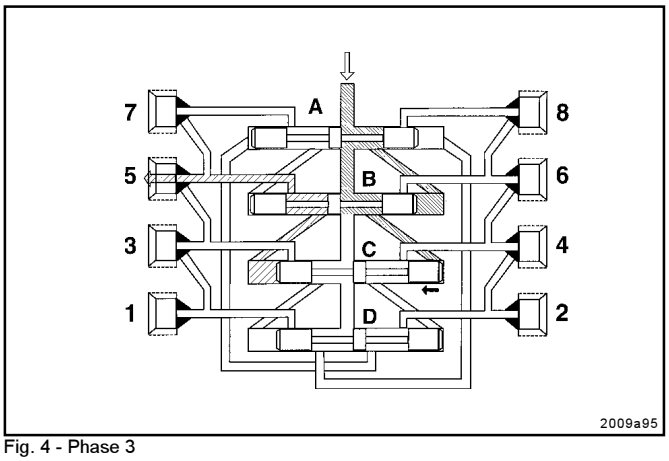

Fig. 4 - Phase 3

Phase 3

- Once piston B has reached its left-hand final position, the junction channel to the right-hand end of piston A is opened.
- The lubricant which flows from above (white arrow above) moves piston C (black arrow) to the left, causing the lubricant quantity ahead of the left-hand end of piston C to be dispensed to outlet 5.

Lubricant under pump pressure

Lubricant under piston delivery pressure

Lubricant pressureless

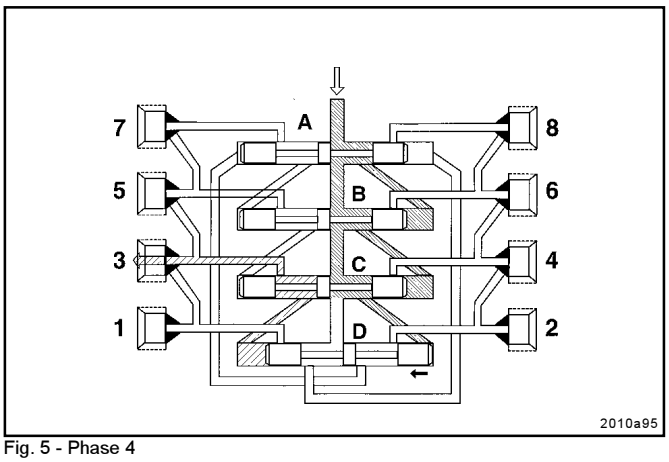

Fig. 5 - Phase 4

Phase 4

- The channel to the right-hand end of piston D is now open (black arrow).
- The lubricant which is fed from above (white arrow above) moves piston D to the left, causing the lubricant quantity ahead of the left-hand end of piston D to be dispensed out of the metering device via outlet 3 (dashed arrow).

Lubricant under pump pressure

Lubricant under piston delivery pressure

Lubricant pressureless

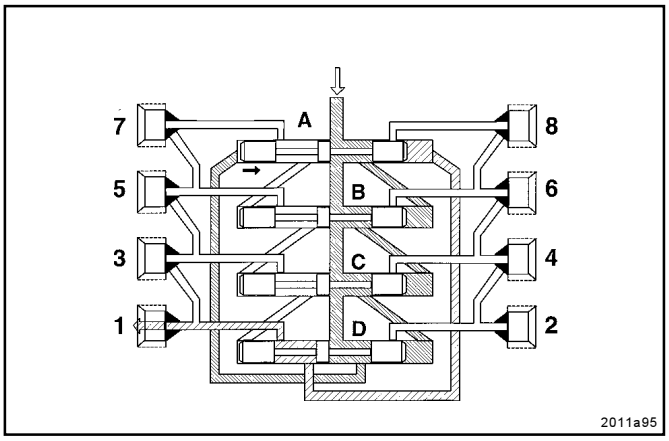

Fig. 6- Phase 5

Phase 5

- In phase 4, piston D had opened the junction channel to the left-hand end of piston A.
- The lubricant flowing in (white arrow) moves piston A to the right (black arrow), causing the lubricant quantity to be dispensed to outlet 1(dashed arrow).
- In the subsequent distribution sequence, pistons B - D are moved from the left to the right one after the other.
- A complete distribution sequence is finished and a new cycle can begin.

Lubricant under pump pressure

Lubricant under piston delivery pressure

Lubricant pressureless

When the lubricant supply is interrupted

- the pistons come to a halt;
- the lubricant is no longer dispensed to the lubrication point.
- When the lubricant is fed again to the metering device, the cycle begins from the point where it had been interrupted.

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Monitoring of the Operation

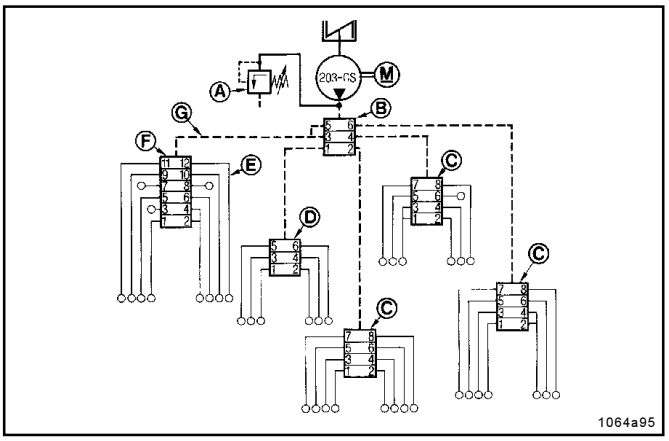

Fig. 7 - Example of a lubrication system

A - Safety valve
B - Main metering device SSV 6
C - Secondary metering device SSV 8
D - Secondary metering device SSV 6
E - Pressure plastic tube (dia. 6x1,5 mm)
F - Secondary metering device SSV 12
G -High pressure plastic hose (dia. 8,6 x2,3 mm)

System-dependent monitoring

- The main metering device (B, Fig. 7) and the secondary metering devices are connected by a main line G. This feature automatically causes the linkage of the progressive system connected downstream of the pump.
- If only one piston does not move in any metering device or if the metering device can no longer dispense any lubricant via its outlets, this metering device will block itself.
- If one of the secondary metering devices is blocked, the main metering device is also blocked. The whole progressive system installed downstream of the pump stops operating.
- The fundamental internal structure of the progressive metering device guarantees the self-monitoring of the sequence within the metering device.
- The linkage makes it possible to monitor the operation of the whole system.

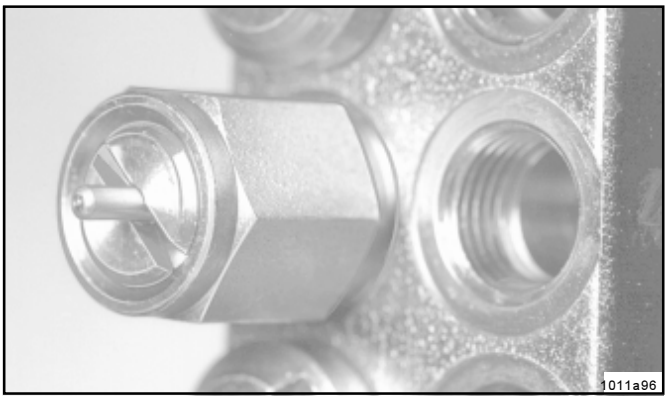

Fig. 8 - Indicator pin installed on metering device

Visual monitoring

- The metering devices can be equipped with an indicator pin which is connected to the piston and moves back and forth during lubricant distribution.
- If there is a blockage in the system, the indicator pin stops moving.

Note: It is also possible to indicate the movements of the indicator pin or any blockage in the system by means of a control switch (KS) or a proximity switch (KN).

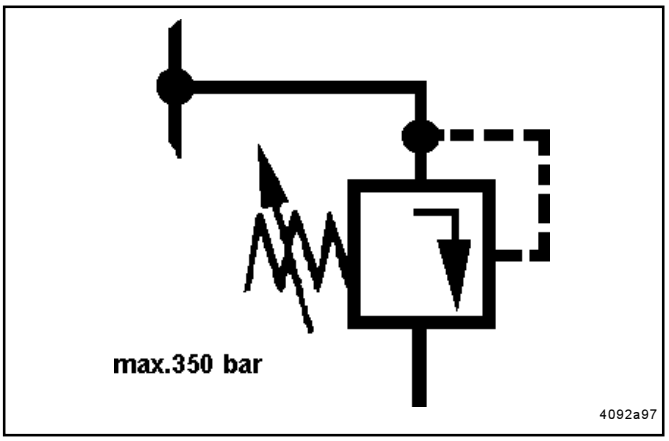

Fig. 9 - Pressure limiting valve

- The whole system can be monitored visually via the pressure limiting valve. If lubricant is leaking at the pressure limiting valve during the distribution sequence, this indicates that there is a blockage in the system.

Important: In the case of the progressive metering devices models SSV 6 - 12 and the block-type metering devices SSV 14 through SSV 22 the **outlets 1 and/or 2 must never be closed**. In the case of the combined progressive metering devices model SSV 14 - 22, **the two outlets with the highest numbers must never be closed**, otherwise the system would block owing to the structure of the metering device.

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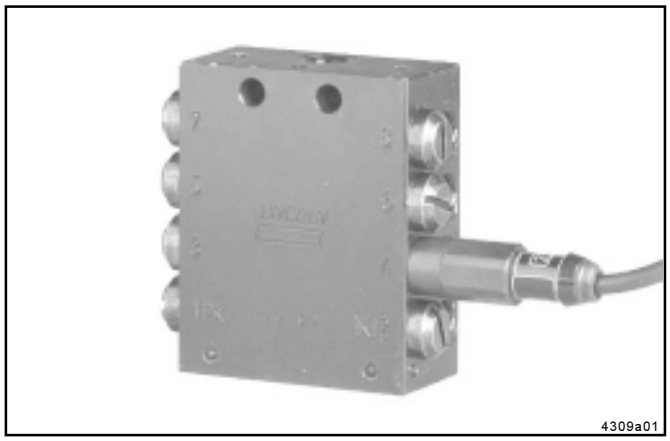

Fig. 10 - Piston detector installed on metering device

Electrical monitoring (microprocessor control)

- A **piston detector** (initiator) which has been installed on a metering device instead of a piston closure plug (M 11 x 1) monitors the **pump operating time** and brings it to a close after all the pistons of this metering device have dispensed their lubricant quantity.
- If there is a blockage in the system or if the pump reservoir is empty, the piston detector can no longer record the piston movements. The switching off signal is not transmitted to the printed circuit board. A fault signal occurs.

Important ! For the system monitoring it is recommended that **one SSV metering device** with **pre-assembled piston detector** be used per lubrication circuit. These special metering devices must be ordered separately for each lubrication system. Refer to Parts Catalog.

- The pre-assembled metering devices have the **designation SSV ... - N** (they are available for SSV 6, 8, 10 and 12). They must be installed in the system instead of a normal metering device.

Determining the Lubricant Output by Combining Outlets

Screw-type fittings (main metering device and secondary metering devices)

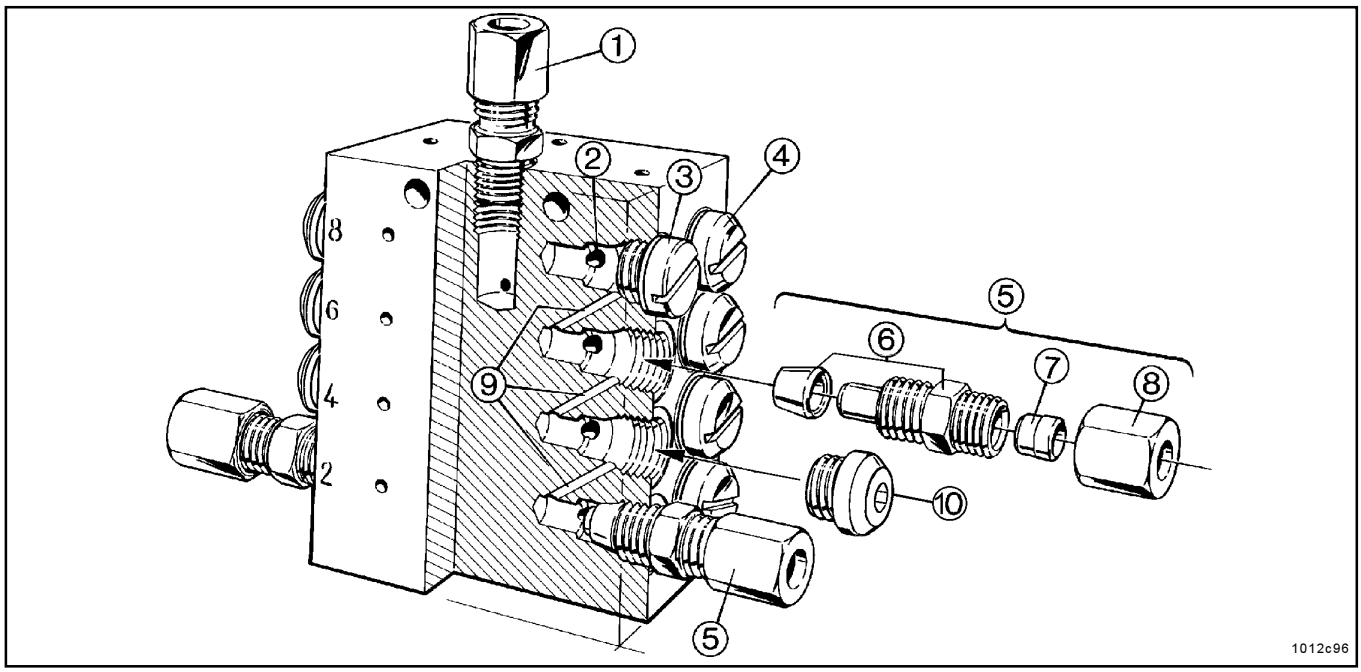

Fig. 11 - Install the outlet fittings and closure plugs in accordance with the dosage

1 - Inlet fitting
2 - Delivery hole of the piston
3 - Closure plug and copper washer (M 10 x 1), in outlet borehole installed
4 - Closure plug (M 11 x 1), piston (champfered)
5 - Outlet fitting assembly
6 - Valve body with clampinf ring
7 - Cutting ring
8 - Coupling nut
9 - Junction channel
10 - Closure plug (M 10 x 1) with hex. socket head and sealing edge, replaces pos. 3

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- The output quantities can be raised by closing outlet boreholes.
- Install a complete outlet fitting 5 in each outlet borehole which will be used. Refer to Fig. 11-13.
- **Never remove closure plug 4** (with chamfer) on the piston side.

Note: Never use closure plug 3 (Fig. 11) as a piston closure plug (G 1/8) 4 on older models of metering devices.

- Clamping ring of valve body assembly 5 (Fig. 11) closes the junction channels 9 to the other outlet channels.

Note: In the case of the push-in type fittings and with the valve body 5 the clamping ring is a firm component part of the valve body (see fig. 12, 13).

Important: In the case of the progressive metering devices models SSV 6 - 12 and with the block-type metering devices SSV 14 through SSV 22 the **outlets 1 and/or 2 must never be closed**. In the case of the combined progressive metering devices model SSV 14 - 22, **the two outlets with the highest numbers must never be closed**, otherwise the system would be blokked.

Tube Fittings, Push-in Type (main metering device)

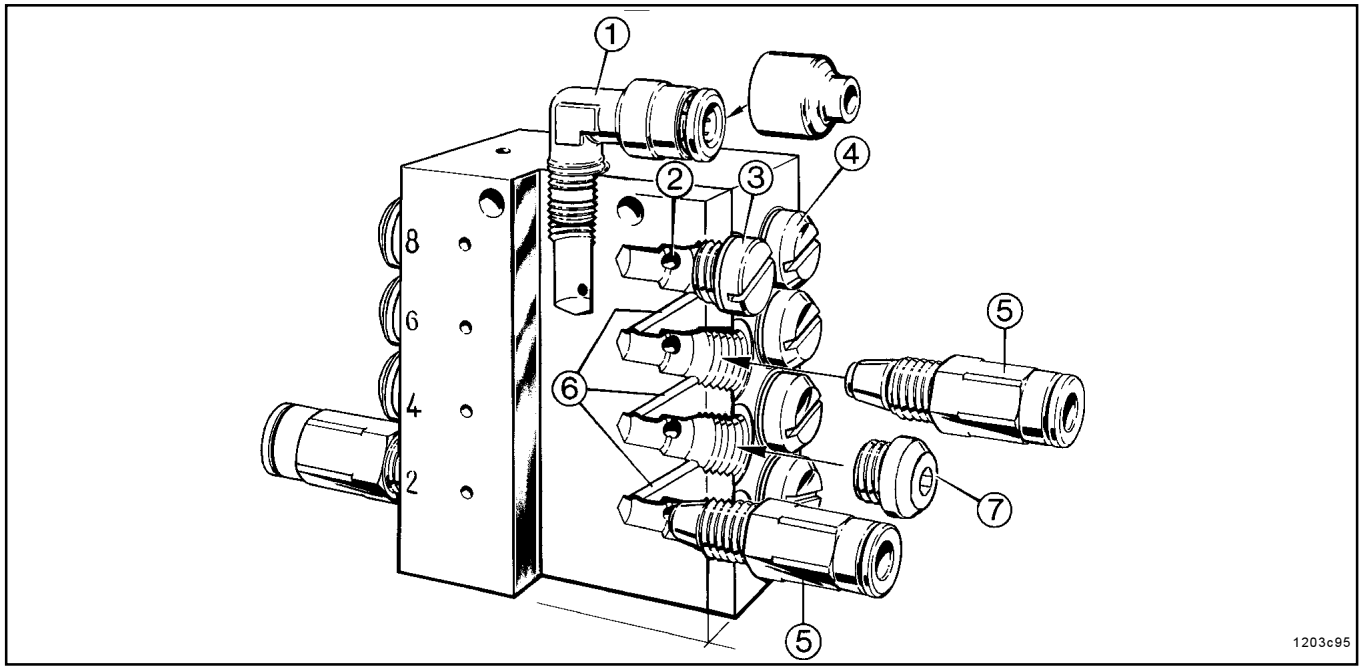

Fig. 12 - Install the outlet push-in type fittings and the closure plugs in accordance with the dosage

1 - Inlet fitting with protective cap *
2 - Delivery borehole of the piston
3 - Closure plug (M 10 x 1) with copper washer installed in outlet borehole
4 - Closure plug (M 11 x 1) (chamfered), piston
5 - Valve body assembly (with reinforced collar)
6 - Junction channels
7 - Closure plug (M 10 x 1) with hex. socket head and sealing edge, replaces pos. 3

* on request

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Tube Fittings, Plug-Type (secondary metering devices)

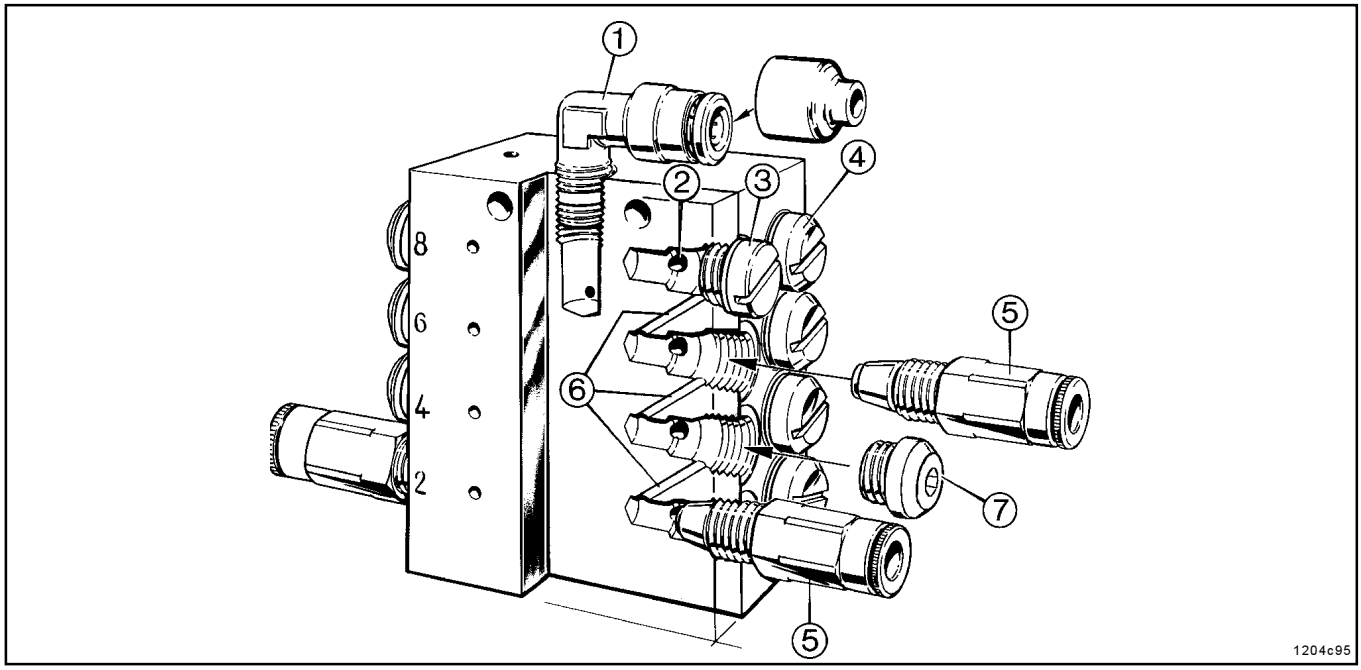

Fig. 13 - Install the push-in type outlets fittings and closure plugs in accordance with the dosage

1 - Inlet fitting
2 - Delivery borehole of the piston
3 - Closure plug (M 10 x 1) with copper washer installed in outlet borehole
4 - Closure plug (M11 x 1) (chamfered), piston
5 - Valve body assembly (with knurled collar)
6 - Junction channels
7 - Closure plug (M 10 x 1) with hex. socket head and sealing edge, replaces pos. 3

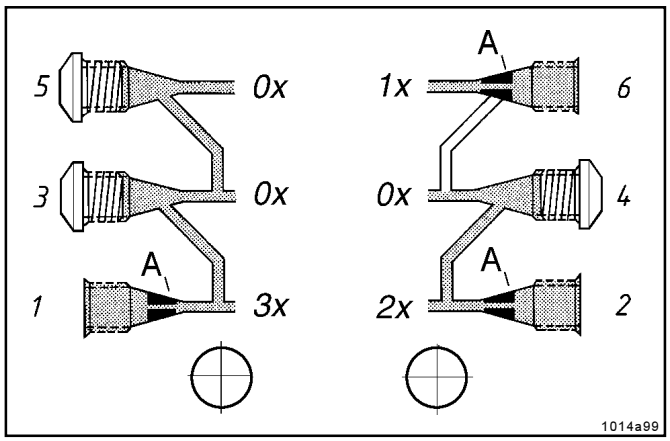

Fig. 14 - Single, double and triple lubricant output

x - Outlet quantity (single, double,etc.)
1... 10 Outlet numbers
A - Clamping ring (brass)

Single lubricant output

- The simple lubricant output is the lubricant quantity dispensed by a piston per stroke and per outlet borehole to one lubrication point. **It amounts to 0.2 cm³.**

Double or multiple lubricant output

- If one or several lubrication points require a double or a multiple lubricant amount, this can be performed by closing one or several outlets.
- As shown in Fig. 14, outlet borehole 4 has been closed. The lubricant quantity supplied by this outlet flows out of the metering device via outlet 2.
- Total quantity at outlet 2:
- is the quantity of outlet 2
- plus the lubricant quantity of outlet 4.
- If a triple quantity is needed (at outlet 1), close the outlet borehole located above the discharge borehole. Refer to outlets 3 and 5.

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Lubricant Metering Devices SSV 14 up to SSV 22

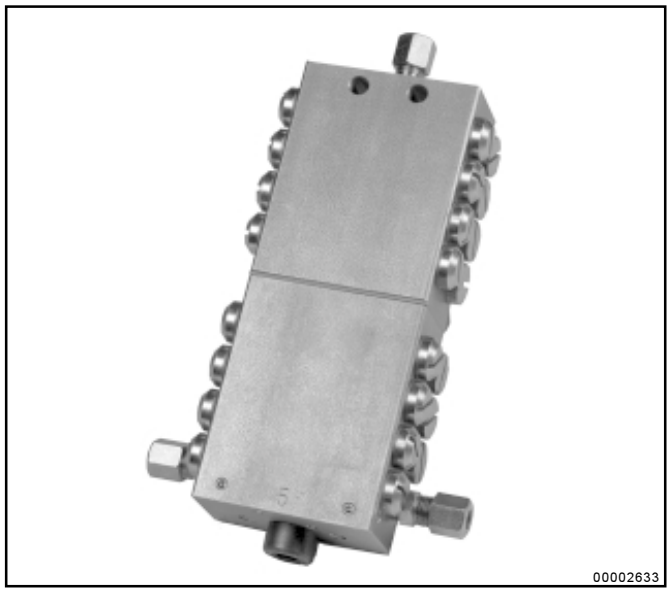

Fig. 15 - Combined lubricant metering device SSV 16

- The combined lubricant metering devices model SSV 14 to SSV 22
- are combined from the basic metering devices SSV 6 to SSV 12.

- The following differences must, however, be noted:
- the outlet numbers of the metering devices SSV 14 to SSV 22 are marked in the opposite direction to those of the SSV 6 to SSV 12 metering devices (outlets 1 and 2 are close to the inlet borehole).
- the two outlets -right-hand and left-hand - with the highest number must never be closed, otherwise the system would be blocked.
- if, for example, outlet 8 is closed, the lubricant quantity dispensed to this outlet flows out of the metering device via outlet 10, etc. Refer to ”Double or multiple lubricant output” above.

- The block-type metering devices SSV 14 through SSV 22 operate in the same way as the types SSV 6 through SSV 12
- Never close the outlets 1 and 2.

Tube fittings, Screw-type

Main and secondary metering device

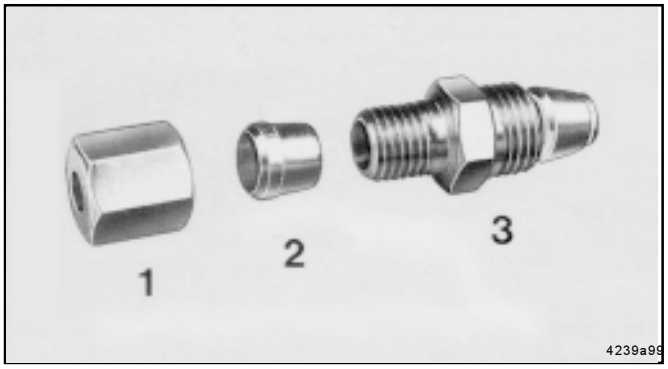

Fig. 16: Single parts of the check valve

1 - Coupling nut
2 - Cutting ring
3 - Valve body with sealing and clamping ring

Inlet tube fittings

- As inlet fitting use only tube fittings R 1/8“ thread.

Check valves

- Install one complete check valve in each outlet borehole which will be used.
- Install a closure plug in each outlet borehole which is not required. Exception: outlet borehole 1and/or 2 for SSV 6 through SSV 12.

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Tube Fittings, Push-in Type

Metering Devices

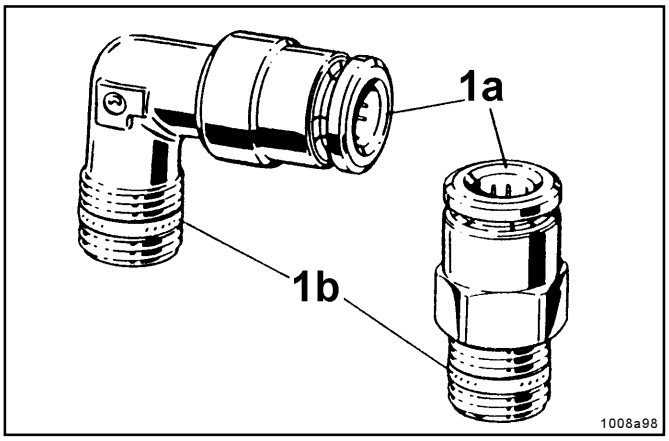

Fig. 17: Inlet fittings

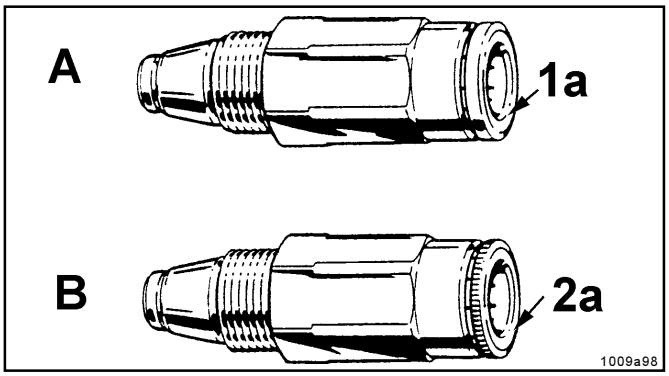

Fig. 18: The different types of check valve

A - Check valve with reinforced collar
B - Check valve with knurled collar
1a- reinforced collar
2a- knurled collar

Inlet tube fittings, straight and 90 °

Important ! For the inlet fittings **use only tube fittings with reinforced collar** 1a (Fig. 17) and sealing ring 1b at the thread.

1a - Reinforced collar
1b - Sealing ring

Check valves

- Main metering device
  Use check valves type (A, Fig. 18) with reinforced collar 1a and smooth flange (Part no. 226-14091-4).

- Secondary metering device
  Use check valves type B with standard collar 2a and knurled flange (Part no. 226-14091-2).

NOTE: On construction machines or agricultural machines use high pressure plastic hoses. In such cases the check valves of the secondary metering devices must have a reinforced collar and smooth flange A.

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Connection of the High-pressure Plastic Hose and the Pressure Plastic Tube

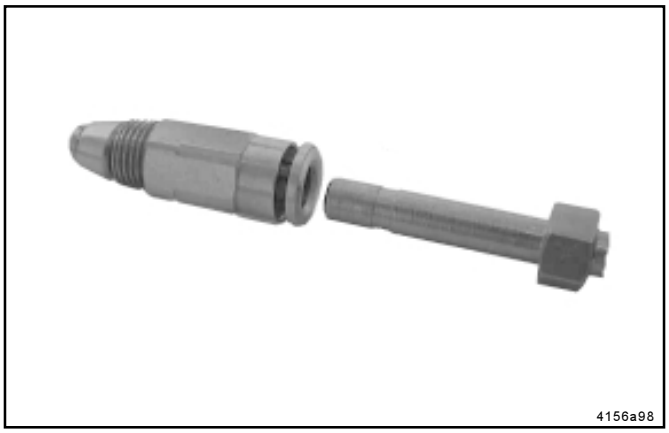

Fig. 19: Check valve with reinforced collar and hose stud

High-pressure range (main metering device)

Important! Connect only main lines (Ø 8.4 x 2.3 mm) with threaded sleeve and hose studs to the **inlet fitting** and to the **check valves** with reinforced collar.

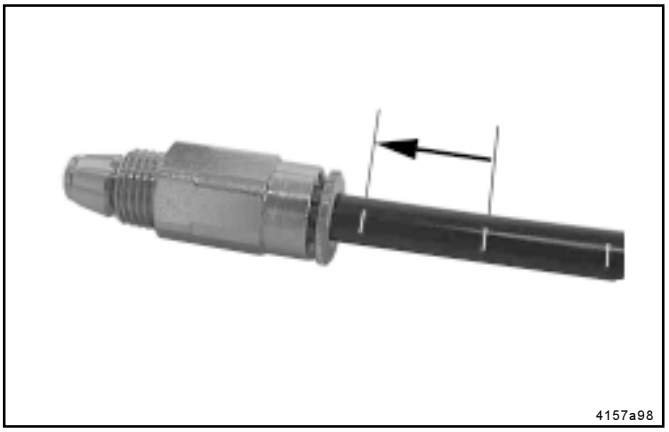

Fig. 20: Check valve wirh knurled collar and pressure plastic tube

Low-pressure range (secondary metering devices)

Connect the pressure plastic tube (Ø 6 x 1.5 mm) to the check valves with standard collet (knurled collar) and to the inlet fittings towards the lubrication point (knurled collar).

*Note: Exceptionally the high-pressure plastic hose (Ø 8.6 x 2.3 mm) with threaded sleeve and hose stud may also be used for the low-pressure section. Applications for **construction machines or agricultural machines**, however, require the use of check valves and inlet fittings (towards the lubrication point) with **reinforced collar** for the low-pressure range. Refer to Parts Catalog.*

- The pressure plastic tubes are marked with white lines (Fig. 20) as an installation aid.
- Cut the pressure plastic tube off at one of the white lines before it is mounted. Then insert the plastic pressure tube into the fitting up to the next white mark. This will ensure a correct installation of the pressure plastic tube in the threaded tube fitting.

Fig. 21: Push-in type fitting with protection cap

Protection Cap for Push-inType Fittings

To prevent dirt from entering the systen, the push-in type fittings, check valves and safety valves can be equipped with protective caps.

Plastic tubes and high-pressure plastic hoses

Plastic tube (Ø 6 x 1,5 mm)

- Use the platic tubes only in the low pressure area, i. e. between the secondary metering devices and the lubrication point.
- Adhere to the pressures and bending radiuses mentioned in the chapter „Technical Data“ when installing the parts.

High-pressure plastic hoses Ø 8,6 x 2,3 mm

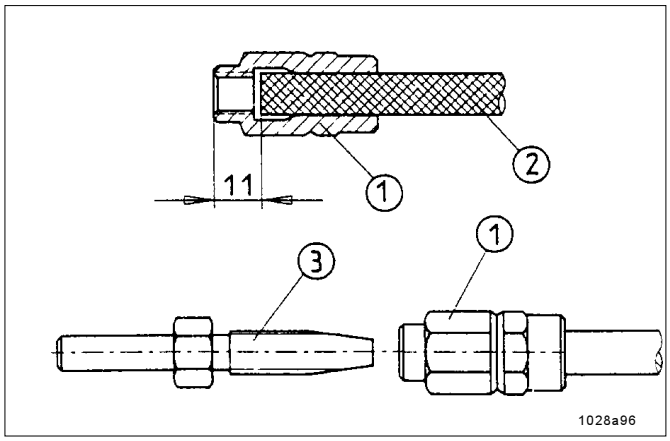

Fig. 22 - Preassembly of the threaded sleeves and hose studs on the high-pressure plstic hose

1 - Threaded sleeve
2 - High- pressure plastic hose
3 - Hose stud

- Use the high-pressure plastic hose only in the high pressure area, i. e. between the pump, main metering device and secondary metering devices.
- Adhere to the pressures and bending radiuses mentioned in the chapter „Technical Data“ when installing the parts.

Fitting the threaded sleeves and hose studs on the high- pressure plastic hose

- Screw the threaded sleeve, item 1 Fig. 22, counterclockwise onto the high-pressure plastic hose 2 until the illustrated dimension of 11 mm is reached. Then screw the hose stud 3 into the threaded sleeve 1.

Important: Before screwing the parts 1 and 3, rub them with oil.

Note : The outside diameter of the high-pressure plastic hose may show variations in dimension. In such a case, press the threaded sleeve 1 at the end where it will be screwed onto the high-pressure plastic hose so that it becomes oval in shape (1 to 2 mm). This will prevent the high-pressure plastic hose from being pushed out of the sleeve when the hose stud is screwed.

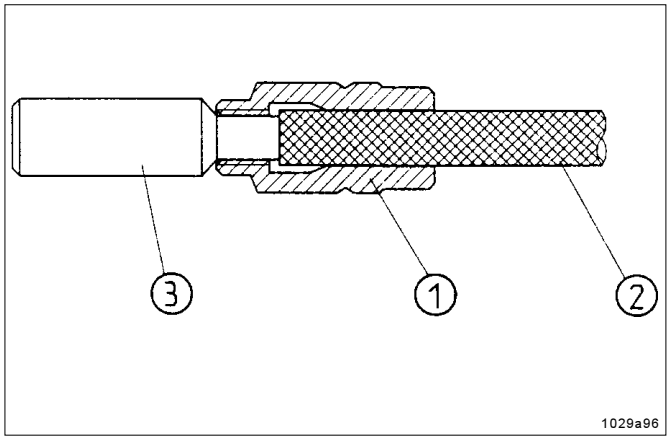

Fig. 23 - Preassembly of the threaded sleeves by means of an adjusting gauge

1 - Threaded sleeve
2 - High-pressure plastic hose
3 - Adjusting gauge 432-23077-1

Note: When using the special adjusting gauge 432-23077-1 (see Pats Catalog) screw the threaded sleeve counterclockwise onto the high-pressure plastic hose until the gauge inserted in the sleeve begins to rise.

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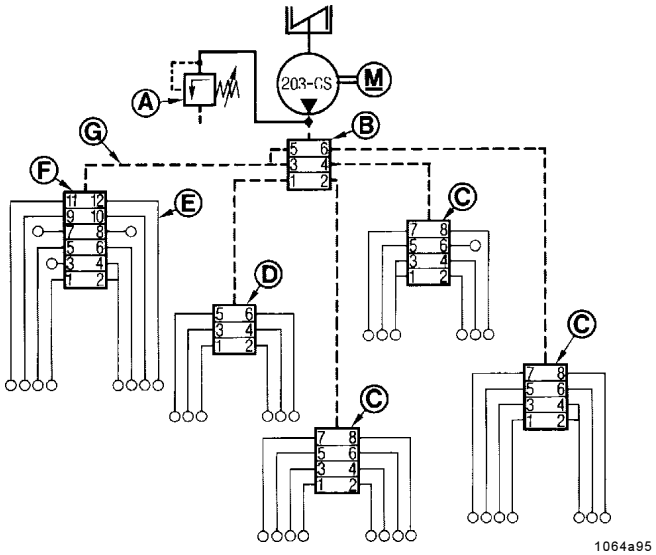
Troubleshooting

• **Fault: Blockage in the downstream progressive system**	
• **Cause:**	• **Correction:**
• Bearing, lines or metering device clogged. • In the case of the metering devices SSV 6 through 12 and with the combined metering devices SSV 14 through SSV 22 the outlet boreholes 1 and/or 2 are closed. In the case of the combined metering devices SSV 14 through 22 the two outlet boreholes with the highest numbers are closed. The fault can be identified by: a) grease leaking at the safety valve; b) the fact that the indicator pins (if any) installed on the metering devices no longer move; c) the fault signal of the signal lamp (if any) or LED function indication	• Find out which is the cause of the blockage and rectify it in accordance with he following example: • Allow pump to run (see ”To trigger an additional lubrication cycle”). • Loosen all high-pressure plastic hoses G leading to the secondary metering devices one after the other from the main metering device (B, Fig. 24) . If f. ex. grease or oil emerges under pressure from outlet 1 of main metering device B, the blockage will be found in the lubrication circuit of the secondary metering device D. *Note: If there is a blockage in the downstream system, the high-pressure plastic hoses are under pressure. In such a case, it is difficult to detach the push-in type connection parts of the high-pressure plastic hose. Relieve the system by removing the closure plug on the push-in type safety valve or, if any, by removing the filling nipple.* • Let the pump run. • Disconnect all pressure plastic tubes E from secondary metering device D one after the other. If f. ex. grease or oil emerges under pressure from outlet 3 of metering device D, the blockage will be found in the line of outlet 3 or in the connected bearing. • Pump the blocked bearing or line through by means of a manual pump. *Note: When checking the individual outlets, keep each outlet loosened for quite a while because per each motor revolution there is only one piston stroke. A complete cycle of all metering devices* requires several strokes. • Check safety valve A. Replace it, if necessary.
 Fig. 24 - Example of a lubrication system A - Safety valve B - Main metering device C - Secondary metering device SSV 8 D - Secondary metering device SSV 6 E - Pressure plastic tube F - Secondary metering device SSV 12 G - High-pressure plastic hose	

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• Fault: Blockage in the downstream progressive system (continued)	
• Cause:	**• Correction:**
• Metering device blocked	• Replace the metering device or clean it in accordance with the following procedure: • Remove all tube fittings. • Unscrew the piston closure plugs. • If possible, try to eject the piston using a smooth drift (∅ smaller than 6 mm; 0.24 in.). • **Important:** The pistons are precision-fitted into the holes. Mark the pistons with regard to their installation position and direction after they have been removed. They must not be exchanged. • Thoroughly clean the metering device bodies in a fat-dissolving washing agent, blow them through with compressed air. • Press free the slant ducts (Ø 1.5 mm; 0.59 in.) at the thread ends of the piston holes using a pin. • Clean the metering devices again and blow them through. • Reassemble the metering devices. • If copper washers are used, replace them. • Before the tube fittings are reassembled, the metering devices should be pumped with oil several cycles by means of a manual pump. Check that the pressure in the metering device does not exceed 25 bar (362.8 psi). • If the pressure is higher, replace the metering device.
• Fault: Differing lubricant amounts at the lubrication points	
• Cause:	**• Correction:**
• Lubricant metering not correct	• Check the lubricant metering acc. to the lubrication chart
• Respective valve body has been assembled without clamping ring	• Remove the valve body and install a clamping ring
• Setting of the pause time or operating time incorrect	• Check the time setting. Refer to the corresponding setting in the respective “Operating Instructions”.
• Fault: Over- or underlubrication of the lubrication points	
• Cause:	**• Correction:**
• Setting of the operating time or pause time incorrect	• Check the time setting at the control units or printed-circuit boards. Refer to the corresponding setting in the respective “Operating Instructions”.

Technical Data

Metering Device Model SSV

Lubricant output per outlet and per stroke	0.2 cm^3
Max. operating pressure	350 bar
Min. operating pressure	20 bar
Max.differential pressure between two outlets	100 bar
Outlet connection for tube	ø 6 mm
Inlet connection	G 1/8
Operating temperature	- 25° C to 70°C

Push-in Type Tube Fittings

High pressure range, p max.	350 bar
Inlet tube fittings of the metering devices	
Outlet fittings, main metering device	
Low-pressure range, p max.	250 bar
Outlet fittings, secondary metering devices	
Inlet fittings to the lubrication point	

Lines

High-pressure plastic hose (dia. 8,6 x2,3 mm)

Min. bursting pressure (in connection with screw-type connectors).	600 bar
Min. bending radius.	35 mm
Min. temperature	- 40° C

Pressure plastic tube (dia. 6x1,5 mm)

Min. bending radius	50 mm
Bursting pressure at 20° C	approx.210 bar
Min. temperature	- 40° C

Tightening Torques

Closure plug (piston) in metering device	10 Nm
Closure plug (outlets) in metering device	10 Nm
Inlet fitting in metering device	
screw-type	17 Nm
push-in type	10 Nm
Outlet fitting in metering device	
screw-type	10 Nm
push-in type	8 Nm
Compression nut onto inlet fitting	10 Nm
Compression nut onto outlet fitting, screw-type	
plastic tube	5 Nm
steel tube	10 Nm
Indicator pin in metering device	12 Nm
Piston detector on metering device	12 Nm
Proximity switch on metering device	12 Nm
Mounting of the metering device	10 Nm

Lubricants

Important: The manufacturer of the centralized lubrication system tests the lubricants **exclusively** on their **transportability in the centralized lubrication systems**, not on their compatibility with other material.
The lubricants tested did not cause any damage due to incompatibility on the material used by us. The composition of the lubricants, their behavior during the transport and their compatibility with other material are not known to us.
Lubricant recipes may change. In case of doubts, send your request for more information to the manufacturer of the centralized lubrication system.

- The manufacturer of the centralized lubrication system can accept no liability for:
- damages on parts of the centralized lubrication system caused by chemical or biological changes of the lubricant used
- damages due to the use of greases that are not or only conditionally transportable in centralized lubrication systems.

Important: The lubricants released by us have not been tested with regard to their long-term behavior. Therefore, we can give no guaranty for damages caused by chemical reactions of the lubricant with components of the centralized lubrication system.

Lubricants (Cont.)

The QUICKLUB pump model 203 can dispense greases up to NLGI grade 2 or mineral oils of at least 40 mm²/s (cST) at 40°C.

Important: Absolute cleanliness is essential when handling lubricants. Impurities will remain suspended in the lubricant and cannot settle. This will block the delivery channels, thus causing damage to the bearings.

Recommended greases for QUICKLUB systems

Manufacturer	Type	Base soap	Min. delivery temperature
AGIP	F1 Grease 24	Ca	
ARAL	Multipurpose ZS 1/2	Ca/Li	
AUTOL	Top 2000	Ca	-10 ° C
AUTOL	Top 2000 W	Ca	-20 ° C
BP	Lubricating grease	Ca	
BP	C1 Lubricating grease	Ca	-20° C
CASTROL	CLS - Grease	Li/Ca	
ESSO	Cazar K2	Ca	
ESSO	High pressure grease	Ca	
FIAT LUBRIFICANTI	Comar 2	Li	-25° C
FINA	Ceran LT	Ca	-20° C
FINA	Cera WR 2	Ca	
FUCHS	FN 745	Ca	-25° C
FUCHS	Renocal FN3	Ca	-20° C
FUCHS	Renolit HLT 2	Li	-20° C
MOBIL	Mobilgrease	Li	-30° C
MOLYKOTE	TTF 52	anorg. thickness	-30° C
OPTIMOL	Longtime PD 2	Li	- 20 ° C
OPTIMOL	OLIT CLS	Li/Ca	- 15 ° C
SHELL	Retinax C	Ca	
WESTFALEN	Greasalit ZSA	Li	-15° C
ZELLER & GMELIN	ZG 450	Li	
ZELLER & GMELIN	ZG 736	Li	

Biodegradable greases

Manufacturer	Type	Base-soap	Min. delivery tempera-ture
ARAL	BAB EP 2	Li/Ca	
AUTOL	Top 2000 Bio	Ca	-25° C
AVIA	Biogrease 1	Li	to 0 ° C
DEA	Dolon E 2	Li	-20° C
FUCHS	Plantogel S2	Li/Ca	
KLÜBER	Klüberbio M 72 - 82	Ca	-20° C

Use lubricants with solid matter additives only after having consulted the manufacture system.